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NEWSLETTER OF THE LONDON CHAPTER, ONTARIO ARCHAEOLOGICAL SOCIETY

APRIL, 1982 82-4

PALAEO-INDIAN RESEARCH IN SOUTHWESTERN ONTARIO

This month, the Chapter is pleased to present a slide illustrated talk by Brian Deller describing his recent excavations and survey activities. Deller and Ellis' excavations on the Thedford II and particularly, the Crowfield site last season produced startling new information concerning Southwestern Ontario's earliest documented inhabitants - the Fluted Point peoples. Their work has propelled Ontario into the forefront of Palaeo-Indian research in the Northeast, if not the entire eastern portion of the continent!

Come out and share in this new and exciting information! Meeting time is 8:00 P.M. on April 8 at the Museum of Indian Archaeology.

EXECUTIVE REPORT

The March 22 executive meeting was most capably hosted by vice-president Paul Lennox in St. Thomas. All Chapter executive attended to discuss the final details of our Lake Erie Basin Symposium publication grant application to the Ontario Heritage Foundation. Our president will be sending a letter of information to the Society executive in Toronto concerning our publication plans.

Ted reported that speakers had been arranged for the two remaining spring meetings. Jim mentioned that the Museum of Indian Archaeology had assigned Mr. Peter Timmins as coordinator of the forthcoming City of London Archaeological Survey.

On the topic of new business, Jim Keron suggested that Chapter members might wish to participate in the Dorchester Swamp Environs Survey which he will be initiating this year. Jim is enthusiastic about the area's potential for a variety of sites dating from Fluted Point Palaeo-Indian times onwards. Those interested in taking part should contact Jim at our April meeting or telephone him at 285-2379 after 6:00 P.M.

A final matter of business brought up last Monday was the purchase of Chapter field equipment for projects such as the Harrietsville site excavation. Jim felt that the purchase of some shovels, trowels, etc. and materials to construct more functional screens might be in the Chapter's best interests. This matter will be brought up for membership consideration at our next general meeting.

SOCIAL REPORT

Thanks to our Chapter volunteers, all of the material excavated from the Harrietsville village has been washed and sorted, while cataloguing is progressing rapidly. Members who attended our last lab even had time to assist in sorting some of the Calvert village artifacts. Many thanks to our stalwarts!

Two weekend conferences are scheduled for April in our Region. The first is the New York State Archaeological Association annual meeting, to be held in Buffalo from April 23 to 25. Ontario archaeology will be represented on the programme. During the following week, the Canadian Archaeological Association annual meeting will be running from April 29 to May 2 at the Holiday Inn on King Street in Hamilton. Local members will also be presenting papers at this conference. For details concerning either of the above, members can contact Bill Fox during the day at 433-8401.

This month, your editor is pleased to present a research paper contributed by Mr. Martin Cooper. Martin is a graduate student at the University of Toronto and has been active in local archaeology for over five years.

A PRELIMINARY REPORT ON THE CARBONIZED PLANT REMAINS FROM THE DYMOCK VILLAGES (AeHj-2)

MARTIN S. COOPER

The Dymock I and Dymock II sites (AeHj-2) were rescue excavated during the summer of 1981 by Bill Fox of the Ministry of Citizenship and Culture, Archaeology and Heritage Planning Branch, London. A preliminary

report on the excavations is available (Fox, 1982). Briefly, the sites are located adjacent to the Thames River, near Glencoe, Ontario (see Figure 1). The sites represent two distinct hamlets or villages on successive terraces of the river. Dymock I is situated on the lower terrace and is probably slightly earlier in time than the Dymock II component. Both sites contain numerous pit features and were palisaded. A portion of a possible house structure was recorded on Dymock II. Radiocarbon dates from both villages indicate that they were occupied during the 11th century A.D. (Ibid).

Figure 1: Location of the Dymock Villages

The cultural affiliation of the sites' inhabitants is Younge Tradition. While contemporary to the Iroquoian Glen Meyer peoples of Southwestern Ontario, artifacts and mortuary patterns suggest Krieger site and Younge Phase connections (Ibid: 17).

The plant remains from the Dymock sites present a good opportunity to examine the relationship between the former inhabitants and the local vegetation. It is anticipated that through this study a number of questions will be addressed and others raised. The former questions include the following:

1) What types of wild and cultivated plants did the Dymock sites inhabitants utilize?

2) What do these plants tell us about the subsistence activities at the sites?

3) What can the plant remains tell us about the seasonal occupation of the sites?

4) What was the nature of the immediate site environment at the time of occupation?

5) What are the differences between the plant remains assemblages of the two sites?

The purpose of this preliminary report is to present the information analyzed to date and to examine the above questions. The Dymock sites also provide a unique opportunity to examine two relatively contremporaneous communities which utilized the same local environment.

The analysis was carried out in the Paleobotany Lab at Erindale College, University of Toronto. Dr. Gary Crawford of Erindale College, provided the identification of plant remains reported in this study.

RECOVERY AND PROCESSING OF CARBONIZED PLANT REMAINS

Screened Sample

The screened sample represents all plant remains recovered from the screening of soil during the normal process of excavation. The screen used was exclusively 6.4 mm mesh. All feature soils excavated, except for samples reserved for flotation, were processed through screens.

The total weight of plant remains from the screened sample derived from the Dymock I site is 40.95 grams, while the total weight from the Dymock II site is 31.52 grams. In all, the screened sample analyzed weighed a total of 72.47 grams. Tables 1 and 2 summarize the results.

Table 1: Summary of Plant Remains from Screened Sample of the Dymock I Site, by weight (gm)

FEATURE Number-Layer	TOTAL	Kernel	MAIZE Cupule	Stalk	SQUASH	UNIDENTIFIED SEED	UNIDENTIFIED PLANT	BUTTERNUT	UNIDENTIFIED NUT	CHARCOAL
7	0.17	-	-	-	-	-	0.17	-	-	-
8	0.05	-	0.05	-	-	-	-	-	-	-
9-1	0.75	-	-	-	-	-	-	0.75	-	-
9-2	1.53	0.40	-	-	-	-	-	0.52	-	0.61
11a	2.75	0.08	-	-	-	-	-	2.67	-	-
11-2	0.04	0.04	-	-	-	-	-	-	-	-
11-3	0.05	0.05	-	-	-	-	-	-	-	-
12	0.32	0.08	-	-	-	-	-	0.24	-	-
15	0.49	0.25	-	-	-	-	0.04	0.20	-	-
16	0.67	-	-	-	-	-	0.05	-	-	0.62
17	2.29	0.47	-	-	-	-	-	1.76	-	0.06
17a	4.27	-	-	-	-	-	0.05	4.00	-	0.22
17-1	0.41	-	-	-	-	-	-	0.41	-	-
18-2	0.27	-	-	-	-	-	-	0.27	-	-
19	0.77	0.07	-	-	-	-	-	0.70	-	-
20	0.12	-	-	-	-	-	-	0.12	-	-
22	0.20	0.08	-	-	-	-	-	0.12	-	-
23	3.26	0.46	-	-	-	-	0.14	2.20	-	0.46
28	10.16	0.20	-	-	1*	-	-	9.96	-	-
28-1	8.03	0.65	-	-	-	1	0.24	6.32	-	0.82
28-2	2.28	0.20	-	-	1	-	P	2.08	-	-
29-3	0.36	-	-	-	-	-	-	-	0.23	0.13
30	0.40	-	-	-	-	-	0.40	-	-	-
90	0.50	0.15	-	-	-	-	0.05	0.20	-	0.10
Post 3 Hillside Midden	0.43	-	-	-	-	-	-	0.43	-	-
N42E6	0.07	0.07	-	-	1	-	P	-	-	-
N45E8	0.16	0.05	-	-	-	-	0.07	-	0.04	-
N43E6	0.16	-	-	-	-	-	-	0.16	-	-
Totals	40.95	3.30	0.05	-	3	1	1.21	33.11	0.27	3.02

* : Number of identifications
P : Present

Flotation Sample

The flotation samples were obtained in a selective manner. Portions of features containing wood ash and abundant charcoal were floated because of their perceived archaeobotanical potential. Flotation was carried out with the aid of a SMAP machine (Watson, 1976). Samples were dried and then placed in plastic bags and labeled.

Table 2: Summary of Plant Remains from Screened Sample of the Dymock II Site, by weight (gm)

FEATURE Number-Layer	TOTAL	MAIZE Kernel	MAIZE Cupule	MAIZE Stalk	UNIDENTIFIED SEED	UNIDENTIFIED PLANT	BUTTERNUT	UNIDENTIFIED NUT	CHARCOAL
1	0.93	0.81	-	-	-	0.12	-	-	-
1-1	0.76	0.76	-	-	-	-	-	-	P
2	1.56	0.47	-	0.04	-	-	0.94	-	0.11
6	0.05	0.05	-	-	-	-	-	-	-
36	1.80	-	-	-	-	1.80	-	-	-
36-2	0.05	0.05	-	-	-	-	-	-	-
37	5.51	1.78	2.90	0.67	-	0.16	-	-	-
37-1	0.05	0.05	-	-	-	-	-	-	-
37-2,3	1.43	0.40	0.23	0.67	-	P	-	0.13	-
37-4	1.80	0.45	1.23	0.12	-	P	-	-	-
38	0.12	0.12	P	-	-	-	-	-	-
41	0.10	0.10	-	-	-	-	-	-	-
43	0.10	0.10	-	-	-	-	-	-	-
44	-	-	-	-	-	P	-	-	-
48	0.05	0.05	-	-	-	-	-	-	-
50	0.82	0.30	0.10	-	-	0.42	-	-	-
51	2.25	1.96	-	-	1*	-	-	-	0.29
51-3	1.28	1.00	0.24	-	-	0.04	-	-	-
51-4	0.99	0.47	0.32	-	-	-	-	-	0.20
55	0.17	0.17	-	-	1	P	-	-	-
55-2	0.15	0.15	-	-	-	-	-	-	-
59	0.50	-	-	-	-	0.50	-	-	-
60	0.10	0.10	-	-	-	-	-	-	-
61	0.05	0.05	-	-	-	P	-	-	-
62	0.12	0.07	0.05	-	-	-	-	-	-
63	0.30	0.19	-	-	-	0.11	-	-	-
63-3	0.06	0.06	-	-	-	-	-	-	-
64	1.75	1.12	0.23	0.22	-	0.18	-	-	P
65	0.03	-	0.03	-	-	-	-	-	-
68	2.71	1.01	-	0.20	-	1.24	-	0.15	0.11
69	0.48	0.36	0.12	-	-	-	-	-	-
69-1	0.52	0.15	0.12	-	-	-	-	-	0.25
69-2	0.32	-	-	-	-	P	-	0.20	0.12
69-3	0.49	0.20	0.03	-	-	-	-	0.26	-
70	0.12	-	-	-	-	-	-	-	0.12
71	0.19	0.05	-	-	-	-	-	-	0.14
72	0.33	0.05	0.02	-	-	0.13	-	-	0.13
73	0.59	0.54	0.05	-	-	-	-	-	-
73-1	0.19	0.05	-	-	-	-	-	-	0.14
73-2	0.11	0.11	-	-	-	-	-	-	-
74a	0.05	0.05	-	-	-	-	-	-	-
75	0.53	0.36	-	-	-	0.10	-	-	0.07
76-1	0.94	-	-	-	-	0.94	-	-	-
77	0.05	0.05	-	-	-	-	-	-	-
77-3	0.13	-	0.13	-	-	-	-	-	-
79	1.24	-	-	-	-	1.24	-	-	P
83	0.33	0.12	-	-	-	0.21	-	-	-
85-2	0.21	-	-	-	-	0.21	-	-	-
86	0.26	-	-	-	-	-	-	-	0.26
Totals	32.67	13.93	5.80	1.92	2	7.40	0.94	0.74	1.94

* : Number of seeds
P : Present

A total of 225 litres of soil from Dymock I were processed by flotation. The flotation samples were derived from 7 features, representing 30% of the Dymock I feature total. At the Dymock II site 527 litres of soil were floated. These samples were derived from 14 features, representing 24% of the total features from that component. A total of 752 litres of soil were floated from both sites, yielding 25 light and heavy fractions, derived from various layers of 21 separate features.

This report includes the analysis of four light fraction samples, two from Dymock I and two from the Dymock II site. These four samples have a combined weight of 298.26 grams.

Laboratory Processing

In the lab the samples were processed through a series of nine geological sieves, to facilitate sorting. In this way, units of similar size could be examined separately and thus, speed the analysis. The contents of the first three sieves (4.00mm to 2.36mm) were entirely separated into their constituents, while the contents of the finer sieves (2.00mm to 0.212mm) were searched only for carbonized seeds or unusual remains.

PLANT REMAINS

Cultigens

Maize (Zea mays) and squash (Curcubita pepo) were the only cultigens recovered from the Dymock sites. By weight, maize represents the major plant food component for both villages. At Dymock I, maize occurred in 52% of the features and accounted for eight percent of the total screened sample, by weight. In the Dymock I flotation sample it represented 86% of the plant food components (see Table 3).

TABLE 3

Dymock Site Flotation Samples: Sample Components as Percentage of Total Sample Weight and Plant Food Components as Percentage of Total Plant Food Weight

		Flotation Sample Components (%)					Plant Food Components (%)			
							Maize			
Pit Feature-Layer	Total Sample Wt.(gm)	Small Bone	Unidentified Plant Remains	Wood Charcoal	Plant Food	Total Plant Food Wt.(gm)	Kernals	Cupules	Squash Rind	Seeds (excluding maize)
29-2	70.14	1.8	1.3	52.9	34.0	23.88	75.2	10.5(133)*	0.1	14.2
9-1	36.33	1.2	0.4	97.8	0.6	0.21	100.0	-	-	p
1-2	7.77	-	4.4	83.6	12.0	0.93	59.1	p (3)	p	40.9
69-2	52.21	0.9	0.2	95.5	3.4	1.79	41.3	37.4 (39)	-	21.22

* : number of cupules

p : present

Maize in the Dymock II screened sample occurred in 75% of the features and represents 66% of the total screened sample, by weight. In the flotation sample from Dymock II maize accounts for 69% of the plant food component.

Carbonized maize remains from both sites consist of kernels, cupules and ten embryos, while stalk fragments were found only in the screened sample from Dymock II. Some of the maize has been identified as the eight row eastern complex variety and some probably derives from a 10 row variant. A complete examination of maize variety will be presented in the final report.

Difference in maize remains between the two sites is difficult to assess. In the screened sample, which includes all features excavated, maize is found in greater quantity in the Dymock II sample. This is apparent in the

total weight, as well as in the percentage represented. Even with the exclusion of nut remains from the Dymock I sample, maize accounts for 43% of the sample. This is compared to 69% for Dymock II, excluding nut remains. In the flotation samples differences in the quantity of maize are less apparent. This is most certainly due to the small sample size. At this point in the analysis, nothing conclusive may be said about differences in maize remains between the two sites.

Squash remains were found in the flotation samples of both sites, while only the screened sample from Dymock I yielded squash. Carbonized squash remains include 12 seeds and three rind fragments from Dymock I and nine rind fragments from the Dymock II village.

Nine seeds and rind fragments from the Dymock I site are associated with a radiocarbon date of 1040 ± 80 A.D. This is the earliest dated squash in Southern Ontario, predating all confirmed identifications by about 300 years (McAndrews, et al., 1981). The positive identification of Curcubita pepo was facilitated by an examination of rind cross section under a scanning electron microscope.

Grass Seeds and Greens

Grass seeds were found in both site samples, although in limited quantity at Dymock I. At Dymock II, one flotation sample produced 151 carbonized grass seeds. Eighty-nine of these were large (@ 5mm) and may indicate intentional harvesting, rather than fortuitous carbonization. These distinctive grains are either Agropyron sp. or Elymus sp. Further analysis, with the aid of comparative material, will confirm their identification. In addition to the grass grains, numerous carbonized grass-like stems were encountered in the same flotation sample Grass seeds similar to these have been identified in flotation samples from Japan and Wisconsin (G. Crawford, personal communication).

Carbonized seeds from green, leafy plants are present in limited numbers from both sites (see Table 4). These include chenopod (Chenopodium sp.) and purselane (Portulaca sp.). The single purselane seed was encountered in the Dymock I sample.

TABLE 4

Dymock Site Flotation Samples: Total Numbers of Carbonized Seeds

Pit Feature-Layer	Total Number	Total Wt.	Grains and/or Greens				Fleshy Fruit Seeds				Other Seeds					Cultigens	
			Chenopod	Grass	Knot-weed	Purse-Lane	Black-berry	Elder-berry	Haw-thorn	Straw-berry	Sumac	Hog-peanut	Ground Cherry	Unknown	Unident-ifiable	Maize kernals	Squash
29-2	1284	15.76	3	4	-	1	34	1	1	1	1070	-	-	6	17	137	9
9-1	6	0.17	-	-	-	-	-	-	1	-	-	-	-	-	1	4	-
Dymock I Total	1290	15.93	3	4	-	1	34	1	2	1	1070	-	-	6	18	141	9
1-2	132	0.93	-	3	-	-	-	-	-	-	110	-	-	-	5	14	-
69-2	275	0.95	3	151	-	-	24	-	-	-	57	2	1	-	26	11	-
Dymock II Total	407	1.88	3	154	-	-	24	-	-	-	167	2	1	-	31	25	-
TOTAL	1697	17.81	6	158	-	1	58	1	2	1	1237	2	1	6	49	166	9

These plants would have been desired for their greens and seeds. The small number found; however, precludes any discussion of the importance of their role in the Dymock peoples' subsistence. Hundreds of uncarbonized chenopod seeds were encountered in the flotation samples and were easily separated from the carbonized chenopods.

Fleshy Fruit Seeds

The most prevalent fruit seed found in both site samples is raspberry or blackberry (Rubus sp.). These seeds were found in three of the four flotation samples and are equally common on both villages.

Ethnohistorically, raspberries were eaten fresh or dried and stored for winter consumption (Yarnell 1964: 58).

Hawthorn (Crataegus sp.), strawberry (Fragaria sp.), and elderberry (Sambucus sp.) were found only in the flotation samples from Dymock I and in limited amounts (see Table 4). Like raspberry, these fruits may be preserved for winter use.

Other Seeds

Sumac (Rhus typhina) seeds were found in large quantities in both the Dymock I and Dymock II flotation samples. One large sample from Dymock I produced over 1,000 carbonized seeds.

Sumac's versatility as a plant resource is indicated by its inclusion in all five of Yarnell's (1964) categories of native plant utilization. These categories include food, beverage, smoking, medicine and dyeing (Ibid:184). Its presence in large quantities in the Dymock samples suggest it was being intentionally collected. Its function in the subsistence regime of the Dymock inhabitants is unknown.

Two wild legumes, tentatively identified as hog peanut (Amphicarpas sp. were found in one Dymock II flotation sample.

A possible ground cherry (Physalis sp.) seed was also found in the same Dymock II flotation sample (see Table 4).

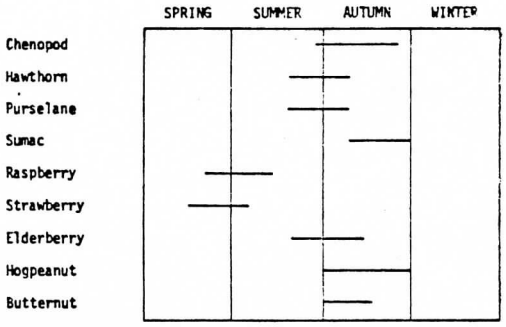
Nuts

Butternut shells were the only nut remains identified from the entire sample. Large amounts of butternut (Juglans cinera) were encountered in the screened sample from Dymock I. Butternut shell accounted for 90% of the Dymock I screened sample, by weight. The Dymock II site, on the other hand, produced only 3% butternut by weight. This represents the greatest difference between the two villages in terms of plant remains. This discrepancy may be due to differences in seasonality between the two sites or changes in subsistence activities from the time of Dymock I occupation to the occupation of Dymock II. The differences could also be due to the sampling of specific activity areas of these villages. In other words, nut processing at the Dymock II site may have been carried out in a specific area of the village that was previously destroyed.

SEASONALITY

The plant remains identified to date indicate that both the Dymock I and Dymock II villages were occupied during the early summer to late fall. Table 5 summarizes the seasonal availability of plant remains, based on the seasonal information provided by Yarnell (1964).

Table 5: Seasonal Occurance of Plant Remains from the Dymock Sites (Based on Yarnell, 1964)



While these plants confirm an early summer-late fall occupation of the sites, they do not rule out a year round occupation. Strawberry, raspberry and butternut are resources which may be stored over the winter months. Faunal analysis has already indicated a spring occupation at the sites (Fox, 1982), and seasonal information from both faunal and floral analysis must be integrated in an attempt to accurately determine seasonality.

A comparison of indicators between the two sites suggests that they were occupied during the same seasons. The paucity of butternut in the screened sample from Dymock II; however, may represent a difference in the intensity or focus of fall resource procurement. The future analysis of heavy flotation fractions will hopefully clarify the nature and differences of seasonal activities between the two villages.

ENVIRONMENTAL INDICATORS

The plant remains present in the archaeobotanical sample from both villages provide insight into the nature of the immediate site vegetation at the time of occupation. In general, the plant remains are indicative of a disturbed environment. This is not surprising as the growing of maize and squash attest to a significant impact on the local forest cover. By its very nature, horticulture interrupts natural succession and thus encourages the growth of weedy plants.

The sumac, raspberry, strawberry, grass, elderberry, hawthorn, chenopod, purselane and ground cherry found in the flotation samples all indicate that by the 11th century A.D., the Dymock inhabitants had created a significant impact on the local environment. An important implication of this is that as horticulture increased in intensity, it provided a habitat encouraging the growth of weedy plants, thus increasing the variety and abundance of local plant resources.

CONCLUSIONS

This preliminary analysis of carbonized plant remains from the Dymock I and Dymock II villages indicates that at both components maize horticulture represented the major source of plant food. The presence of squash at both sites is the earliest occurrence of this cultigen in

Southern Ontario, suggesting that these Younge Tradition peoples (Fox, 1982) may have been responsible for the introduction of squash from areas to the south and west to the Ontario Iroquois to the east. This hypothesis is further supported by the early presence of beans on the 12th century Younge Phase Bruner-Colasanti site in Essex County (Lennox, 1981).

A wide range of wild plant remains in the sample may represent an important supplement to cultivated foods. The weedy nature of these plants suggest a substantial disturbance of the local site environment, most certainly due to, among other activities, horticultural practices.

The kinds of plant remains present suggest an early summer to late fall occupation at both villages, although a year round occupation cannot be ruled out.

A comparison of plant resources represented on the two components exhibits a marked difference in terms of nut remains. The lack of butternut at Dymock II may represent a change in subsistence activities or seasonality, between the two sites. Differences in maize importance are at this point equivocal; however, it is anticipated that further analysis will clarify this problem. Given the present differences in sample size between the two sites, there are no apparent major variations in regard to other plant remains.

ACKNOWLEDGEMENTS

The author would like to thank Dr. G.W. Crawford of Erindale College, University of Toronto for his encouragement, assistance and enthusiasm during the analysis. Bill Fox of M.C.C. generously provided the plant remains for the analysis. Clara Stewart of Erindale College is greatly acknowledged for preparing Tables 3 and 4.

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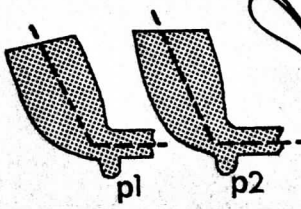
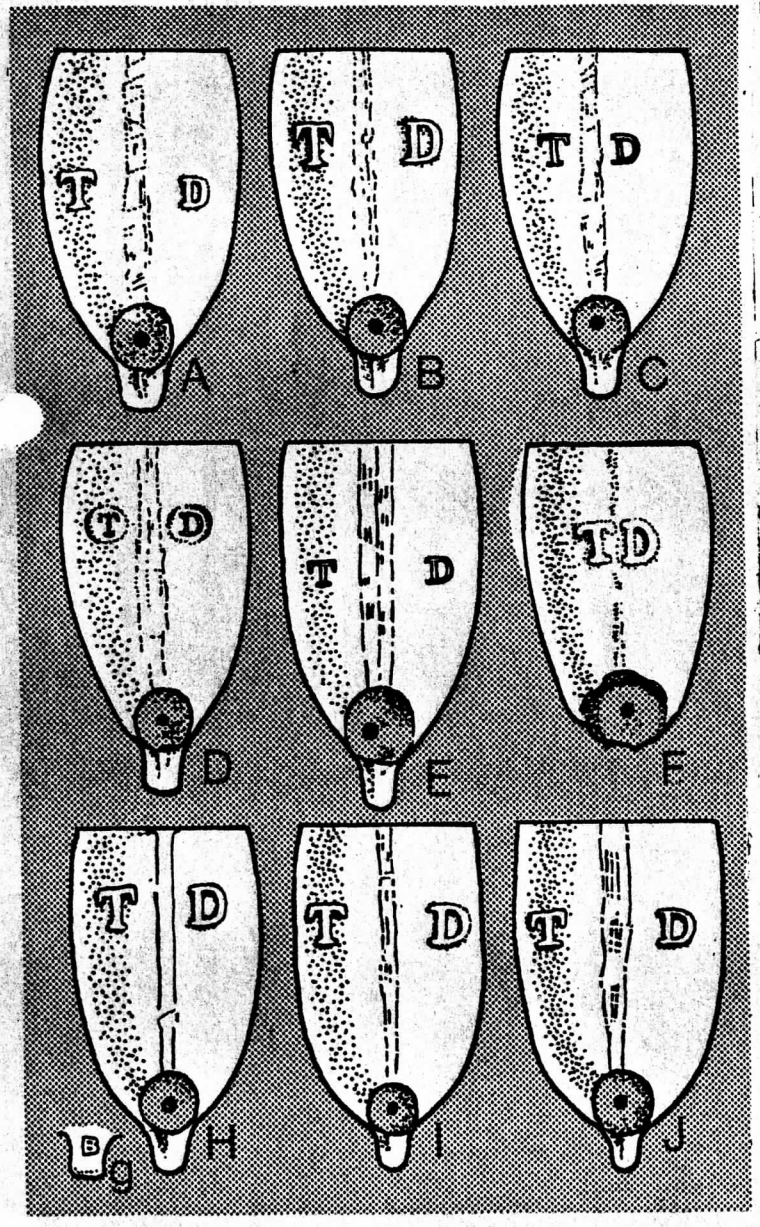
NINETEENTH CENTURY NOTES

PLAIN TD CLAY TOBACCO PIPES PART II. THOMAS KENYON



While many of the "fancy" TD pipes (see Part 1) are from the sites dating to the early and mid-19th century, the plain TD's illustrated here are from the last half of the 19th century. Even in the closing decades of the century, the TD's remained popular. For instance, Mrs. Thebo, a storekeeper in Killarney (Ont.), was in 1882 still ordering boxes (a gross) of TD pipes from the wholesale firm of T. Long & Bros. in Collingwood. In 1882, a box was costing her $1.25, although a few years later the price dropped to $1.00.

Bowl profiles of plain TD pipes (Fig. A-K) fit two categories (Fig. P1 and P2). In P2 the top of the bowl is horizontal to the stem, in P1 it is at a downward angle. Pipes A, E and F have a P1 profile, the others are P2. All TD marks are in serif style letters, and all are placed on the back of the bowl. The letters may be either impressed or in relief.



Pipes illustrated: A - TD in relief, stem impressed with MURRAY/GLASGOW (1830-61).
B - TD in relief, stem impressed McDOUGALL/GLASGOW (1846-1867).
C - TD impressed, stem impressed HENDERSON/MONTREAL (1847-75).
D - T and D in small impressed circle.
E - TD impressed, stem impressed BANNERMAN/MONTREAL (1858-1907).
F - TD in relief, from J. Croker site, c.1825-45.
G + H - TD in relief, stem impressed W. WHITE/SCOTLAND.
I - TD in relief, stem impressed McDOUGALL/SCOTLAND.
J - TD in relief, DAVIDSON & RAY/TORONTO (Merchant's name).
K - TD in relief, stem has OHIO/RING BRISTOL in relief (Ring dates to 1803-84).

Note: pipes marked SCOTLAND should date to after 1891.

Illustrations Actual Size